

REMARKS

Claims 1-4 are pending. The applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

Claims 1 and 2 were rejected under 35 USC 103(a) as being unpatentable over Winterer et al. in view of Kang, Kleinhans et al. and Chen et al. The applicants respectfully request that this rejection be withdrawn for the following reasons.

Claim 1 has been amended to recite that the casing has a recess and that the conductive member penetrates the casing to link the recess and an outside of the casing. Also, claim 1 now recites that the protective member fills the recess and fully covers the sensor chip and the bonding wire.

In the present application, the inventors recognized a problem in conventional pressure sensors that the protective member formed of gel is constricted and swollen as a result of cooling and heating cycles. This generates stress on the bonding wire which decreases the life of the product. For instance, the stress may cause a neck portion of the bonding wire to break. See page 3, lines 5-10 of the specification. The inventors solved the problem by combining bonding wire formed of Au and Pd with a protective member that includes flourine gel. None of the prior art references of record recognizes this problem.

It would not have been obvious to one of ordinary skill in the art to combine the references in the manner proposed in the office action. The patent to Kleinhans et al. discloses a moisture sensor 1 that is covered with a gel 4. No bonding wire is located in the gel 4; therefore,

the patent to Kleinhans et al. does not have the advantage of the present invention of preventing breakage of the bonding wire. There is no reason, motivation, or suggestion to employ the flourine gel of Kleinhans et al. in the apparatus of Winterer et al. According to MPEP 2143.01 and other authorities, the prior art must suggest the desirability of the claimed invention. Therefore, this rejection should be withdrawn.

The reason given in the office action to employ the flourine gel of Kleinhans et al. is to "protect the circuit against corrosion of the metallic parts." This is not a reason or motivation to combine the flourine gel of Kleinhans et al. because the device of Winterer et al. already employs a gel 32 that protects against corrosion; thus, there is no need to add gel for corrosion protection. See column 5, lines 40-52 of Winterer et al. Further, even if there were a reason for one of ordinary skill in the art to have employed the gel of Kleinhans et al. in the device of Winterer et al., the patent to Kleinhans et al. discloses two types of gel, silicon gel and flourine gel. There is no reason for one of ordinary skill in the art to have selected the flourine gel over the silicon gel if the purpose is to protect against corrosion, since both perform this function. Thus, this rejection should be withdrawn.

Claims 3 and 4 were rejected under 35 USC 103(a) as being unpatentable over Winterer et al. in view of Kang, Kleinhans et al., Chen et al. and Mizuno. The applicants respectfully request that this rejection be withdrawn for the following reasons.

Claims 3 and 4 depend on claim 1, directly or indirectly. Therefore, claims 3 and 4 should be patentable at least for the reasons given above with respect to claim 1.

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In view of the foregoing, the applicants submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

If there are any problems with the payment of fees, please charge any underpayments and credit any overpayments to Deposit Account No. 50-1147.

Respectfully submitted,


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